

Remarks

Claims 1-5, 7-9, 11-20, and 22 remain in the application, of which claims 1 and 16 are in independent form. Claims 6, 10, 21, and 23-27 are canceled by this amendment.

Claims 24-27 stand objected to. The Examiner states that in claim 24 the limitation “the positioner” lacks antecedent basis. Applicants respond that claim 24 is canceled, rendering this objection moot.

Claims 24-27 stand rejected under 35 U.S.C. 102(b) for anticipation by U.S. Pat. No. 5,751,585 (“Cutler et al.”). Applicants respond that claims 24-27 are canceled, rendering this rejection moot.

Claims 1-23 stand rejected under 35 U.S.C. 103(a) for obviousness over Cutler et al. in view of U.S. Pat. No. 5,295,014 (“Toda”).

Regarding claims 1 and 16, the Examiner states that Cutler et al. teach an apparatus as claimed except for a two-axis steering mirror, but that Toda teaches a two-axis steering mirror (Figs. 3 and 4) used to deflect a laser beam toward a target location. The Examiner contends that it would have been obvious to use the two-axis steering mirror of Toda in place of the pair of one-axis steering mirrors of Cutler et al.

Applicants respond by amending claims 1 and 16 to recite the pivot point, lens, and entrance pupil subject matter of respective claims 6 and 21, canceling claims 6 and 21, and adding clarifying amendments to claims 1 and 2.

Applicants submit that Cutler et al. describe a pair of single-axis mirrors that each pivot about a line, not a point. Toda describes a laser scanner mirror designed for resonant excitation, not precise beam steering. The scanner does not have a pivot point on its mirror but, rather, Toda’s pivot point is located well behind the mirror. This offset causes a varying laser beam path length from the scanning mirror to the workpiece, which adversely affects laser spot quality on the workpiece (see application ¶¶ 0039, 0040).

Applicants submit that combining the teachings of Cutler et al. and Toda could not result in the claimed invention and believe, therefore, that amended claims 1 and 16 are allowable.

Regarding claims 2 and 17, the Examiner states that Cutler et al. teach that the two-axis steering mirror is further responsive to a second position correction signal for receiving the laser beam and deflecting the laser beam toward the target location. Applicants believe that amended claim 2 and claim 17 are allowable for the reasons set forth above in support of amended claims 1 and 16.

Regarding claims 3 and 18, the Examiner states that Cutler et al. teach positioning the positioner to respective X-axis and Y-axis orthogonal coordinate locations. Applicants believe that claims 3 and 18 are allowable for the reasons set forth above in support of amended claims 1 and 16.

Regarding claims 4 and 19, the Examiner states that Cutler et al. teach a coordinate transform generator for converting one of the first and second error signals to a second coordinate system. Applicants believe that claims 4 and 19 are allowable for the reasons set forth above in support of amended claims 1 and 16.

Regarding claims 5 and 20, the Examiner states that Cutler et al. teach positioning the two-axis steering mirror in response to the mirror positioning information and at least the first position correction signal. Applicants believe that claims 5 and 20 are allowable for the reasons set forth above in support of amended claims 1 and 16.

Claims 6 and 21 are canceled.

Regarding claims 7 and 8, the Examiner states that Cutler et al. teach the steering mirror is positioned by a piezo electric or voice coil actuators. Applicants believe that claims 7 and 8 are allowable for the reasons set forth above in support of amended claim 1.

Regarding claims 9 and 22, the Examiner states that Cutler et al. teach that the positioner moves the workpiece in a second axis direction while the two-axis steering mirror makes corrective movements in a first axis direction. Applicants believe that claims 9 and 22 are allowable for the reasons set forth above in support of amended claims 1 and 16.

Regarding claims 11 and 12, the Examiner states that Cutler et al. discloses that the workpiece includes an integrated memory circuit including severable links or a trimmable

electronic circuit element. Applicants believe that claims 11 and 12 are allowable for the reasons set forth above in support of amended claim 1.

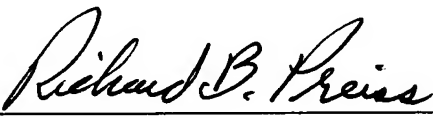
Regarding claims 13-15, the Examiner states that Cutler et al. teach the positioner includes stages that are arranged in respective stacked, split, and planar configurations. Applicants believe that claims 13-15 are allowable for the reasons set forth above in support of amended claim 1.

The Examiner states that should claims 1, 2, 16, and 17 be found allowable, claims 10 and 23 will be objected to under 37 CFR 1.75 as being substantial duplicates of claims 2 and 17. Applicants respond by canceling claims 10 and 23.

Applicants believe that their application is in condition for allowance and respectfully request the same.

Respectfully submitted,

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October 20, 2003

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Attorney Docket No. 50001/84:2